

Chittagong Veterinary and Animal Sciences University
Department of Pathology and Parasitology
July - December Semester Final Examination - 2016
MS in Parasitology
Course title - Entomology
Course code EPR - 602
Full Marks - 40, Time - 2 hours

Answer any **Four (4)** questions in the following: 10.0 x 4= 40.0

1. a) Define Arthropods. Describe the general morphological features of Arthropods and show general classification of arthropods in sketch form. 6.0
b) Why arthropods are important in human and animals health? Explain 4.0

2. a) Define Diapause. Morphologically differentiate the sub order of Nematocera, Brachycera and Cyclorrhapa. 6.0
b) What do you mean by the term "Diptera"? Briefly describe the important morphological features of the order Diptera. 4.0

3. a) How can you identify the following arthropods: (any two) 3X2=6.0
i) *Ctenocephalides canis* ii) Stable flies (iii) *Boophilus microplus*
b) List major four discoveries in the field of Veterinary parasitology at last five years which have introduced in the new area in the same field. 4.0

4. a) Give an account of the tick of veterinary importance with their hosts. Write down the harmful effects and control measures of tick infestation in animals. 4.0
b) Differentiate the followings: (any two) 3x2=6.0
(i) Burrowing from non-burrowing mites (ii) Tick from flea
(iii) Anoplura from Amblycera

5. a) Briefly describe the morphology and biology of a typical three-host tick. 4.0
b) Write short notes on (any two): 3X2=6.0
i) Myiasis ii) Scaly leg mite of poultry iii) Tick paralysis iv) Metamorphosis

Chittagong Veterinary and Animal Sciences University
Department of Pathology and Parasitology
July - December Semester Final Examination - 2016
MS in Parasitology
Course title - Protozoology
Course code -PRT - 602
Full Marks - 40, Time - 2 hours

Answer any four (4) the following questions:

10.0 x 4= 40.0

1. a) Define zoonosis. Mention the sources and the methods of transmission of zoonotic diseases with example. 5.0
b) List the water borne protozoa in animals. How will you control the zoonotic protozoal diseases? 5.0
2. a) Mention the sources and mode of transmission of Trypanosomes in animals. Briefly describes the developmental stages of Trypanosomes. 5.0
b) Write short note on Black head disease in Turkey or Surra in Mare. 5.0
3. a) Enumerate the species those which causes babesiosis in cattle, horse, goat dog and pig. 4.0
b) Describes the epidemiological factors of canine babesiosis in Bangladesh. 3.0
c) Briefly describes the pathogenesis of canine babesiosis. 3.0
4. a) How can you diagnose the following protozoan infections in Parasitology Lab.?
i) Rabbit coccidiosis ii) Babesiosis in cow iii) Anaplasmosis in goat 2X3=6.0
b) "It is difficult to produce vaccine against trypanosomes" – Explain. 4.0
5. a) Draw and label of a typical protozoa which may causes early abortion in cow. 5.0
b) Write short notes on Leishmaniasis and *Neospora caninum* infection in bitch. 5.0

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Department of Pathology and Parasitology

Faculty of Veterinary Medicine

Final Examination of Masters of science in Parasitology

Semester: July- December" 2016

Subject: Molecular Parasitology, Course code: MPR-601

Time: 2 Hours

Marks: 40

Answer **any four** questions from the followings.

1. a) Define genome, proteome, transcriptome and central dogma. 4
b) What is ORF, Exon, gene promoter and RNA splicing? 4
c) Write down the implications of molecular parasitology. 2
2. a) Write down the name of enzymes and their function in DNA replication? 4
b) What are the components of a PCR? Mention the basic steps in a typical PCR reaction 4
c) What are the difference between conventional PCR and Real time PCR? 2
3. a) What is primer? Write down the important criteria for primer selection? 5
b) What do you mean by nested PCR and Multiplex PCR? When you will do these PCR? 5
4. a) What is the Principle of SDS-PAGE? List the chemicals required for SDS-PAGE analysis. 4
b) Describe the principle of Agarose Gel electrophoresis. 2
c) What are Western and Southern blots? 4
5. a) Briefly describe the mitochondrial genome diversity in parasites 4
b) Which molecular structures are responsible for immune evasion in Trypanosomes? 3
c) What are the crucial factors for emerging of new parasites in the world? 3
6. What is population Genetics? Describe the causes that are responsible for polymorphism in parasite population 10

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Final Examination of Masters of science in Parasitology

Semester: July- December" 2016

Subject: Parasitic Ecology and epidemiology, Course code: PEE-601

Time: 2 Hours

Marks: 40

Answer **any four** questions from the followings.

1. a. What do you mean by faunistic study of parasite? why it is essential? 5
b. How human behavior influences the epidemiology of zoonotic diseases? Give example. 5
2. a. How will you effectively control parasitic diseases in any area with combined chemical and biological approach? 5
b. Write down the implications of epidemiology in parasitology 5
3. a. List the procedure to investigate a possible GI parasitic problem in a dairy herd. 3
b. How can you measure the occurrence of diseases in herd? 4
c. Define Co-efficient of transmission, endemic stability and vector competency 3
4. a. How can you determine the sample size in a cohort study for a parasitic disease in a flock? 5
b. Define drug resistance with examples. 2
c. Classify sampling method in a population. 3
5. a. Define epidemic, endemic, pandemic and sporadic patterns in parasitic infection. 6
b. What do you mean by exposure and outcome variable. Give some examples. 4
6. a. Describe your strategy for tick eradication in a farm or herd. 5
b. List the biochemical factors of Fasciola and Haemonchus. 5

Chittagong Veterinary and Animal Sciences University
Faculty of Veterinary Medicine
Department of Pathology and Parasitology
MS in Parasitology (July-December semester) Final Exam'2016
Course Title: Zoonotic Parasites
Course Code: ZPR-602
Total Marks: 40
Time: 2 hours

(Figures in the right margin indicate full marks)

Answer any 4 (four) questions

1. (a) Define parasitic zoonoses. What are the underlying causes of increased prevalence of parasitic zoonoses? 7.0
(b) Describe briefly the role of human behaviour on the emergence of parasitic zoonoses. 3.0
- 2 (a). Enlist the meat borne parasitic zoonoses. Sketch the life cycle and diagnostic criteria of *Taenia solium*. 7.0
(b). Note down the important features of *Trichinella* infection. 3.0
- 3(a). Make short notes on (any two) 7.0
i. Cutaneous larval migrans (b) Alveolar echinococcosis (c) Swimmer's itch
(b). Explain the socio-economic impact of zoonotic parasitic infection. 3.0
- 4 (a). Sketch the transmission pattern of *Toxoplasma gondii*. What measures will you take to control such infection? 7.0
(b). What do you mean by risk assessment? Explain the microbial risk assessment framework. 3.0
5. Write down the source, host range and brief pathogenic significance of following parasites. 10.0
 - i. *Fasciolopsis buski*
 - ii. *Diphyllobothrium latum*
 - iii. *Clonorchis sinensis*
 - iv. *Schistosoma mansoni*
 - v. *Giardia intestinalis*